



COLORADO

**Department of Public
Health & Environment**

Dedicated to protecting and improving the health and environment of the people of Colorado

HEALTH ALERT NETWORK BROADCAST

MESSAGE ID: 09192014 12:00

FROM: CO-CDPHE

SUBJECT: HAN Advisory -Investigation of Acute Central Nervous System Disease Following Respiratory Illness

RECIPIENTS: Local Public Health Agencies/EDs/ID Physicians/Neurologists/IPs/Coroners

RECIPIENT INSTRUCTIONS: Local Health Public Health Agencies - please forward to specific healthcare providers as instructed

HEALTH ALERT

Investigation of Acute Central Nervous System Disease Following Respiratory Illness September 19, 2014

KEY POINTS:

- Nine cases of acute central nervous system disease in Colorado are being investigated by CDPHE, Children's Hospital Colorado, and the Centers for Disease Control and Prevention. All cases were preceded by respiratory illness.
- The etiology is currently unknown—infectious and non-infectious causes including enterovirus-D68 (EV-D68) continue to be considered.
- Providers should report cases of acute myelitis with cranial neuropathy and/or limb weakness to the CDPHE Communicable Disease Epidemiology Section (303-692-2700).

BACKGROUND INFORMATION:

The Colorado Department of Public Health and Environment (CDPHE), Children's Hospital Colorado (CHC), and the Centers for Disease Control and Prevention (CDC) are investigating 9 children hospitalized at CHC with acute neurologic symptoms such as cranial nerve palsies, weakness in one or more limbs, headache, and photophobia. None of the children have experienced altered mental status and one child has required intubation. To date, there has been only mild resolution of neurologic deficits among the cases. Three of these children had underlying medical conditions. The age range of children in this cluster is 1-18 years, with a median age of 9. The majority of the children are from the greater Denver Metro area. CSF analysis has demonstrated pleocytosis. MRIs for all patients have shown significant inflammatory lesions in the spinal cord, brainstem, and/or cranial nerves.



All children had a preceding respiratory illness 3-14 days prior to development of neurologic symptoms and have been febrile. Six have nasal wash specimens which tested positive for rhinovirus/enterovirus via respiratory virus panels. Two of the patients have tested positive for EV-D68 through confirmatory testing at CDC's Picornavirus Laboratory. Confirmatory testing for EV-D68 is planned for the remaining patients.

The significance of these results is unclear, since many children may test positive for this virus in the current outbreak situation and laboratory testing and clinical work-up of the cases is ongoing.

Central nervous system manifestations of enterovirus infection include meningitis, encephalitis and very rarely acute flaccid paralysis. In early 2014, California researchers reported on several children with sudden onset of flaccid paralysis that had been retrospectively identified beginning in 2012. Three cases had preceding respiratory illness. Nasal swabs of two children were positive for EV-D68, but the virus was not isolated from the cerebrospinal fluid, so its role in the pathogenesis of the illness remains speculative. Outbreaks of neurologic illness associated with enterovirus-71 have been well described, including clusters in Denver in 2003 and 2005.

RECOMMENDATIONS / GUIDANCE:

Providers should report cases of acute myelitis with cranial neuropathy and/or limb weakness of unknown etiology to the CDPHE Communicable Disease Epidemiology Section (303-692-2700).

FOR MORE INFORMATION:

<http://www.cdc.gov/non-polio-enterovirus/about/EV-D68.html>